

	DEPARTMENT OF COMMERCE National Institute of Standards and Technology National Voluntary Laboratory Accreditation Program	ISSUE DATE: July 12, 2002
	LAB BULLETIN	NUMBER: LB-7-2002
		LAP: Asbestos
SUBJECT: TEM Grid Square Overloading Criterion		

When grids are prepared for TEM asbestos analysis, some of the grid squares may be observed to be heavily loaded with particulate matter. Overloaded squares are not to be analyzed, so there must be a criterion to define which squares are overloaded and must be rejected. In both the NVLAP TEM Specific Operations Checklist (SOC) and the Asbestos Hazard Emergency Response Act (AHERA), the overload criterion is stated as a percentage of the grid square that is covered with particulate matter, but there is a discrepancy between the criteria stated in the NVLAP TEM SOC and the AHERA. Item 7.9 (b) in the NVLAP TEM SOC requires grid squares with > 10% by area particulate loading to be rejected for analysis, while the AHERA puts the rejection criterion at > 25% by area particulate loading.

This has led to some disagreement among TEM laboratories, their clients, and NVLAP Asbestos Assessors regarding the overload criterion; is the NVLAP requirement 10% or 25%?

The NVLAP requirement is 10% coverage, just as written in NVLAP TEM SOC, Item 7.9 (b). Item 7.9 requires laboratories to have written procedures for examining a grid square and for counting and analyzing particles. Part (b) under 7.9 states "particle loading acceptance criterion (> 10% by area particulate loading or uneven particle loading is rejected)". Thus, for NVLAP TEM laboratories, the 10% criterion is to be written into their procedures, and the laboratories will be assessed to the 10% requirement.

The checklist requirements were written after careful study of the AHERA. In the case of the criterion for acceptance/rejection of loaded grid squares, the Technical Experts at NIST decided 25% coverage would allow asbestos structures to be obscured, so a lower coverage of 10% was adopted as the NVLAP requirement.

If you have any questions, please contact Tom Davis at (301) 975-6499 or e-mail thomas.davis@nist.gov.